REMARKS

The examiner rejected all of the claims with the exception of claims 11, 12, 15, 16 and 18. The rejections are over a combination of Zhang in view of Hirota et al, and to some extent also in view of Amitai or Arai, as set forth in the office action.

In the amendment, the applicant has added the subject matter of claim 17 to independent claim 19, and has added the subject matter of claim 26 to independent claim 20. Claims 17 and 26 have accordingly been cancelled, and the dependency of claims 18 and 27 has been changed accordingly. The claims are clearly patentable in light of the references.

As to claims 19 and 20, the references do not disclose all of the elements of the claims. On page 5 of the Office Action at the end of Section 3, the examiner cites Amitai as suggesting the use of opaque layers in front of the optical element in order to block the user's field of view. Amitai does describe opaque layers located in front of the optical elements. See column 13, lines 57 through 59 of Amitai, which has now issued as U.S. Patent No. 6829095. However, what Amitai is describing is one manner of accomplishing an opaque display in a non-see-through virtual reality system. See the further description in Amitai at column 9, lines 31 through 34.

By way of explanation, see-through HMD's are typically accomplished by directing a computer display such as an LCD screen at a partial mirror located directly in front of the user's eyes. This partial mirror is angled so that it reflects the LCD screen output into the user's eyes. The user can also see through the partial mirror, to see the real world environment.

Amitai is describing the placement of an opaque light shield behind the partial mirror to make the substrate opaque, as is required for a virtual reality display, which does not use a see-through HMD. In other words, the view through the partial mirror is blocked so that the user

cannot see through the mirror, and thus only sees the computer-generated image that is reflected by the mirror into the user's eyes.

In contrast, in claims 19 and 20, opaque material is used to block the portion of the user's field of view outside of the HMD, so that only the augmented reality imagery that is displayed on the HMD is visible to the user. Amitai does not disclose or suggest anything to do with blocking the user's field of view outside of the HMD. Rather, Amitai is specifically directed to blocking the user's field of view in direct alignment with the HMD. As Amitai does not disclose or suggest this element of claims 19 and 20, the claims are patentable over the references.

The applicant has also made a clarifying amendment to the "motion tracker" element of claim 19 to directly state what is meant by the word "coupled", in that the motion tracker can be directly or indirectly attached to the SCBA.

The third independent claim 21 was rejected as obvious over Zhang in view of Hirota. The examiner cites Zhang as teaching a mirror to see the camera viewpoint, citing element 32 in Figure 1. As described, for example, at column 3, lines 13 and 14, element 32 in Zhang is a "combiner." This is a partial mirror that reflects into the user's eyes the infrared image projected by a CRT or LCD display via relay optics 30 onto the partial mirror. The user can also see through this partial mirror, as indicated by the graphics emanating from the eye in Figure 1 of Zhang. This is an example of a typical see-through HMD, as described above.

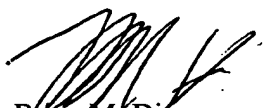
In contrast, claim 21 includes at least one mirrored surface placed in front of a video camera that is coupled to the SCBA. The mirrored surface alters the incoming viewing angle of the camera such that its viewpoint coincides with the user's eye location. An embodiment of this is shown in Figure 2 of the present application.

Zhang's camera is item number 20. Item 20 is located well above the user's eye location. This is no suggestion of the use of a mirrored surface to alter the viewing angle of camera 20, or in other words, to change what the camera sees. Zhang's mirror changes how the display unit's image is seen, and does not effect the camera's view in any way. As Zhang does not disclose or suggest this element of claim 21, that claim is patentable in light of the references of record.

Accordingly, all of the claims are allowable. Early and favorable action is respectfully requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned in Westborough, Massachusetts at (508) 898-1818.

Very Truly Yours,



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